



# **Minnesota's Guaranteed Energy Savings Program (GESP)**

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# Agenda

- Division of Energy Resources Role
- Energy Savings Performance Contracting (ESPC)
- The Power of Bundling Energy Conservation Measures
- Minnesota's new Guaranteed Energy Savings Program
- Project Development Process

## Department of Commerce

# Division of Energy Resources

## Energy Savings Programs



Peter Berger  
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MINNESOTA DEPARTMENT OF  
**commerce**.energy

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Guaranteed Energy Savings Program

Information on the Guaranteed Energy Savings Program. The main goal of the program is to provide technical and financial assistance to state agencies, local government units, school districts, and institutions of higher learning.

What We Do

Summary of our role in the program including the technical and financial assistance available we are able to offer.

Contact Us

Get in touch by phone or email to ask us questions about the program.

Energy Savings Performance Contracting

A financial mechanism that leverages utility savings achieved through investments in energy efficiency.

Government Contractual Resources

A variety of resources for local units of government seeking to develop a performance contract.

Program Goals

List of the ways this program will allow government and school facilities opportunities to achieve energy savings.

Project Development Process

GESP Project Development Process for Public Entities.

[www.energy.mn.gov](http://www.energy.mn.gov)

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# Why did the state create GESB?

- ESBC is a powerful tool that:
  - uses private capital to;
  - reduce energy use and Green House Gas emissions;
  - addresses deferred maintenance needs and;
  - creates jobs in the process
- ESBC are complex projects that require technical, financial and contractual expertise
- Most public entities and/or their staff have never implemented an ESBC project
- Assure successful project outcomes

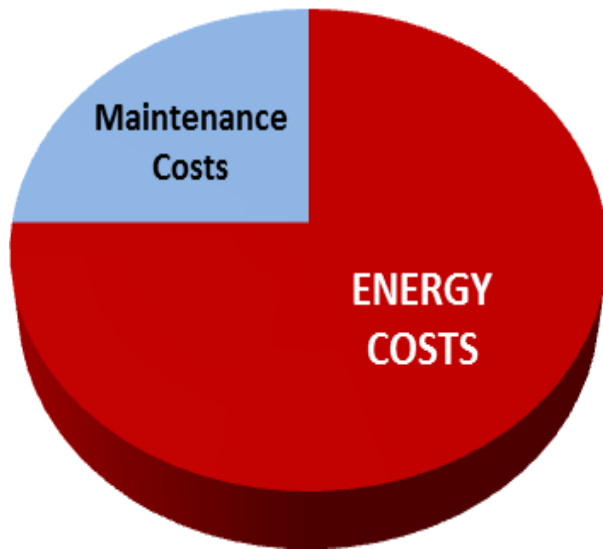
## Division of Energy Resources

# What we do ...

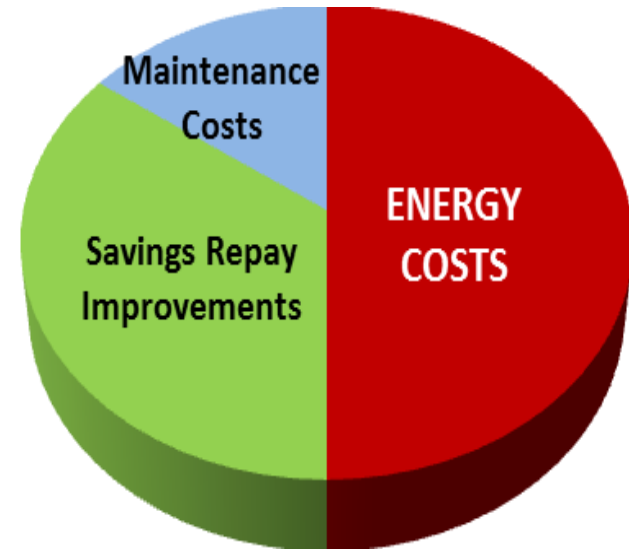
- Program Development and Administration
  - Pre-qualify ESCOs (contractors)
  - Master Contract and Procurement Documents
- Opportunity Assessment
  - B3 Benchmarking Data
  - Needs, Issues and Goals
- Technical Assistance
  - Project Development Assistance
  - Project Implementation Oversight
  - Annual Project Performance Evaluation

# What is Energy Savings Performance Contracting?

Before Improvements



After Improvements



“The use of **guaranteed savings** gained from the maintenance, operations and utilities budgets, as **capital to make needed upgrades** to your building environmental systems, that is financed over a specified period of time.”

*U.S. Department of Energy*

## The Power of Bundling

# Conventional Wisdom

- Benchmark your buildings
- Identify the worst performers
- First implement No-Cost Energy Conservation Measures (ECMs)
- Next use available funds to implement Low-Cost ECMs
- Continue up the payback ladder until available funds are gone
- Move on to the next worst performing building when additional funds become available

# The Power of Bundling Scientific Reasoning

## Oak Ridge National Laboratory

### Mixing Appropriations and Private Financing to Meet Federal Energy Management Goals

Source: June 2012

[http://www.ornl.gov/sci/ees/etsd/btrc/publications/ORNL%20TM%202012\\_235.pdf](http://www.ornl.gov/sci/ees/etsd/btrc/publications/ORNL%20TM%202012_235.pdf)

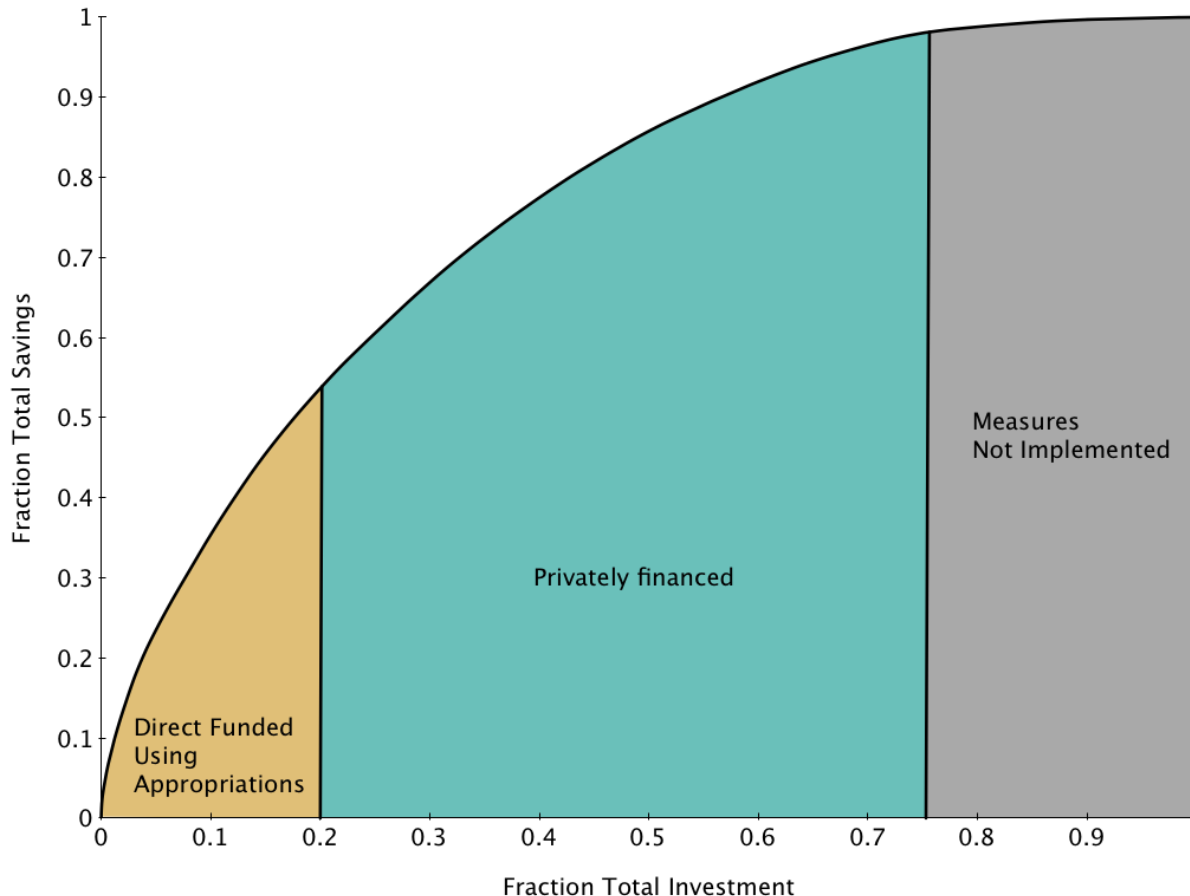
Prepared by: John Shonder



## ORNL Study

# Appropriations Priority

- First, appropriations fund shortest-payback ECMs
- Next, private financing funds as many ECMs as possible

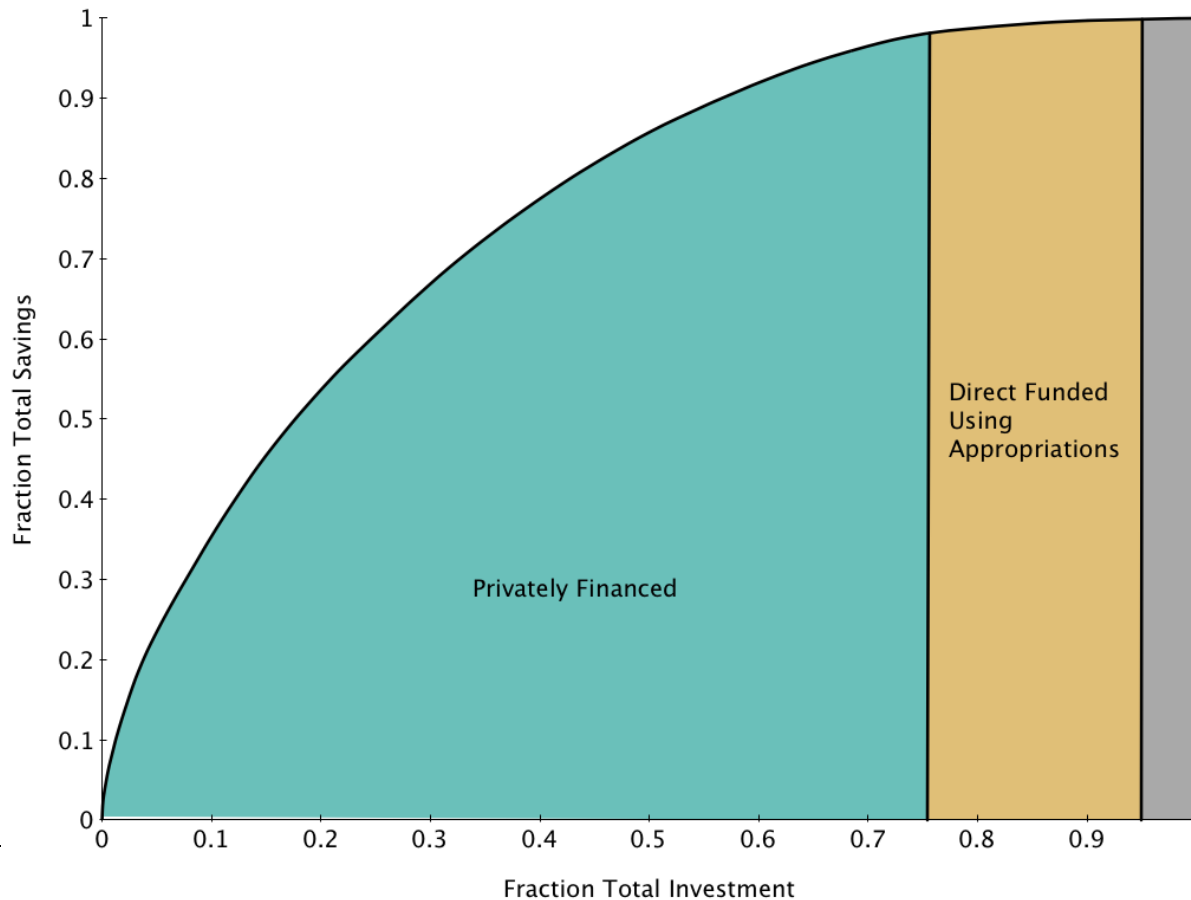


***Only 76% of  
ECMs Can Be  
Implemented***

## ORNL Study

# Finance Priority

- First, private financing funds as many ECMs as possible
- Next, use appropriations on long payback ECMs



***95% of ECMs  
Can Be  
Implemented!***

# ORNL Study

## Conclusions

### Best Financing Strategy

- Use private financing to fund as many ECMs as possible beginning with the shortest-payback ECMs
- Use available appropriations as a one-time buy-down or to fund longer-payback ECMs that cannot be included in the project

“Using appropriations to fund short payback Energy Conservation Measures is like eating your seed corn.”

John Shonder  
Oak Ridge National Laboratory

The Power of Bundling ECMs

# Guaranteed Energy Savings Program (GESP)

- Makes existing systems more efficient
  - Retro-commissioning
  - System additions and enhancements
  - Operation & Maintenance improvements
- Renews facility infrastructure by performing deep energy retrofits
  - System re-design
  - Equipment replacement
- Assures intended results continue to be achieved
  - On-going savings Measurement & Verification
  - Performance Guarantee

# Key Drivers of GESP



# GESP is a Strategy to ...

## Reduce

Energy Use

Operation &  
Maintenance  
Costs

## Renew

Facility  
Infrastructure

Occupant  
Comfort, Health  
& Safety

## Achieve

GHG Emission  
Reduction

Job Creation

Use of  
Renewable  
Energy

Budget Neutral – No Bond Funds Required

# GESP Contracting and Procurement Improvements

<i>State GESP – MS 16C.144</i>	<i>Muni – MS 471.345   School – MS 123B.65</i>
Master Contract Vetted by Attorney General's Office, Dept. of Admin., and Dept. of Comm.	ESCO Provided Contract Document
Open Book Pricing	No Prescribed Pricing Methodology
Maximum Mark-ups and Fees	No Prescribed Mark-ups or Fees
Competitive Bidding of Trade Work and Equipment with Pre-qualified Subs and Spec's	Trade Work & Equipment typically negotiated with Preferred Subs, Manufactures and Distributors
Competitive Bidding of Project Financing	Not Required
Savings Guarantee requires savings be met each year of the guarantee	Savings Guarantee typically allows beneficial use and excess savings to be carried forward
Measurement & Verification Guidelines	No Measurement & Verification Guidelines
Startup & Commissioning Guidelines	No Startup and Commissioning Guidelines
Pro Forma Assumption Guidelines	No Pro Forma Assumption Guidelines
State Provides Technical, Financial & Contractual Assistance	No State Assistance Provided

# Clearly Defined Project Development Process

Process Step	Activity	Typical Duration	Milestone
1 – Opportunity Assessment	Meetings with COMM to review GESP, B3 data, facility needs, issues, and goals	1 – 3 months	Joint Powers Agreement
2 – Define Project Goals	Energy Savings; GHG Emission Reduction; Renewable Portfolio; Building Public Disclosure; Job Creation	1 – 3 months	Issue Site-Specific RFP
3 – ESCO Selection	RFP evaluation and ESCO selection	1 – 3 months	Issue Work Order Contract
4 – Project Development	Perform Investment Grade Audit to develop project scope, cost, savings and funding	3 – 12 months	Issue Work Order Contract Amendment
5 – Project Implementation	Installation of Energy Conservation Measures	6 – 18 months	Certification of Final Completion and Acceptance
6 – Performance Period	Review Measurement & Verification Reports	5 – 25 years (on-going)	Annual M&V Report



# GESP Simplifies Implementation

- Vetted Contracting and Procurement Process
- Pre-qualified Contractors (ESCO's)
- Single-Source Responsibility for Project Development, Financing, Implementation and On-going Performance Guarantee
- Technical Support provided throughout by the Department of Commerce



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[http://mn.gov/commerce/energy/topics/financial/  
Energy-Savings-  
Programs/Government/Guaranteed-Energy-  
Savings-Program/Program-Resources/GESP-  
Program-Master-Contract.jsp](http://mn.gov/commerce/energy/topics/financial/Energy-Savings-Programs/Government/Guaranteed-Energy-Savings-Program/Program-Resources/GESP-Program-Master-Contract.jsp)

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## GESP Contract Documents

# Master Contract

Each of the 11 Contractors has a Master Contract with the Department of Commerce to provide Energy Savings Performance Contracting Services on an as needed basis.

**Exhibit A** – Contractor's Duties (see Master Contract)

Exhibit A includes a Sample Work Order Contract along with the Work Order Contract's Exhibit A and Exhibit B.

**Exhibit B** – Contractor's Fees (see Master Contract)

These are the maximum markups and fees included in Contractor's RFP response to pre-qualify. They differ by Contractor.

**Attachment 1** – Measurement and Verification Guidelines

**Attachment 2** – System Startup and Commissioning Guidelines

**Attachment 3** – General Conditions of the Contract for Construction

AIA Document A201 – 2007 as modified by the Minnesota Department of Commerce

**Parties to Contract**

Minnesota Department of Commerce, and ESCO (Contractor)

## GESP Contract Documents

# Site-specific RFP

The GESP Site-Specific RFP is issued by the state agency or local governmental unit for the purpose of selecting one ESCO from the pool of eleven master contract holders, they determine is best suited to provide energy savings performance contracting services for their site. The RFP also provides for a second round of competition in which the responders' may offer lower markups, overheads and fees for this site, than those they agreed to in the master contract.

### **Site-Specific RFP**

Site-Specific RFP template provided by the Minnesota Department of Commerce. Site-specific data is added by state agency or local governmental unit.

### **Attachments**

Site-Specific RFP will include (i.e. illustrate) all exhibits and attachments added via the work order contract amendment.

### **Parties to Site-Specific RFP**

State agency or local governmental unit will issue RFP to all contractors with a GESP Master Contract.

## GESP Contract Documents

# Work Order Contract

The Work Order Contract is issued by the state agency or local governmental unit to the selected ESCO for the purpose of conducting an Investment Grade Audit (IGA) and developing the Energy Savings Performance Contract project proposal. This Work Order enables the ESCO to perform design and engineering services that are required to provide guaranteed maximum pricing and guaranteed energy savings for the proposed Energy Conservation Measures included in their project proposal. This is also when the ESCO performs necessary pre-installation measurements and proposes their plan for the measurement and verification of savings. Assumptions agreed to in this process form the basis of the Energy Savings Performance Contract and are added as exhibits to the Work Order Contract via amendment.

### Work Order Contract

Issued by state agency or local governmental unit to contractor selected from Site-specific RFP respondents, under authority of GESB Master Contract.

### **Exhibit A – Contractor's Duties**

Exhibit A includes:

Section I: Contractor's duties for performing Investment Grade Audit and Project Proposal

Section II: Scope guidelines and requirements for Energy Savings Performance Contract Proposal

### **Exhibit B – Contractor's Fees**

Maximum markups and fees provided by contractor in response to Site-Specific RFP. These fees can be lower, but not higher, than fees in Contractor's Master Contract.

### **Parties to Work Order Contract**

State agency or local governmental unit and contractor.

## GESP Contract Documents

# Work Order Contract: Amendment

The amended Work Order Contract becomes the Energy Savings Performance Contract, also referred to in statute as the Guaranteed Energy Savings Agreement.

### **Work Order Contract, Amendment No. 1**

Issued by State Agency or Local Governmental Unit to Contractor that is party to Work Order Contract.

**Exhibit A – Contractor’s Duties** is amended and becomes Exhibit A-1

Exhibit A-1 includes:

Section I: Contractor’s duties for performing Investment Grade Audit and Project Proposal.

Section II: Scope guidelines and requirements for Energy Savings Performance Contract proposal.

(Section I and II duties completed at time of amendment).

Amendment adds:

Section III: Facility Description is a list of facilities installation work will be performed in.

Section IV: Contractor’s Duties for ESPC, is the scope of work for installation of energy conservation measures.

**Exhibit B – Contractor’s Fees** is amended and becomes Exhibit B-1

Maximum markups and fees provided by contractor in response to Site-Specific RFP. These fees can be lower, but not higher, than fees in contractor’s Master Contract.

Amendment adds the total project price, detailed by energy conservation measure.

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## GESP Contract Documents

# Work Order Contract: Amendment Exhibits

### **Exhibit C – Savings Measurement and Verification Plan**

Contractor deliverable from Investment Grade Audit and Project Proposal.

### **Exhibit D – Savings Guarantee**

Standard GESP document provided by Minnesota Department of Commerce to in Savings Measurement and Verification Plan.

### **Exhibit E – Equipment Installed by Contractor**

Contractor deliverable from Investment Grade Audit and Project Proposal.

### **Exhibit F – Construction and Installation Schedule**

Contractor deliverable from Investment Grade Audit and Project Proposal.

### **Exhibit G – System Startup and Commissioning Plan**

Contractor deliverable from Investment Grade Audit and Project Proposal.

### **Exhibit H – Standards of Comfort**

Contractor deliverable from Investment Grade Audit and Project Proposal.  
Template provided by Department of Commerce.

### **Exhibit I – Training by Contractor**

Contractor deliverable from Investment Grade Audit and Project Proposal.

### **Exhibit J – Project Pro Forma**

Contractor deliverable from Investment Grade Audit and Project Proposal.  
Template provided by Department of Commerce.

### **Exhibit K – Rebates, Incentives and Grants**

Contractor deliverable from Investment Grade Audit and Project Proposal.

### **Exhibit L – Lease Purchase Agreement**

Standard GESP document provided by Minnesota Department of Commerce

### **Exhibit M – Contractor’s Measurement and Verification Services**

Standard GESP document provided by Minnesota Department of Commerce  
Scope and fee are Contractor deliverable from Investment Grade Audit and F  
M&V Services are required to maintain the Savings Guarantee.

### **Exhibit N – Institution’s Maintenance Responsibilities**

Contractor deliverable from Investment Grade Audit and Project Proposal.

### **Attachment 4 – Investment Grade Audit Report**

Contractor deliverable from Investment Grade Audit and Project Proposal.

### **Attachment 5 – Certificate of Substantial Completion and Acceptance**

Template provided by the Minnesota Department of Commerce.

### **Attachment 6 – Certificate of Final Completion and Acceptance**

Template provided by the Minnesota Department of Commerce.